Amendments to the Claims:

This claim listing will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (currently amended) Membrane electrode unit for membrane fuel cells, comprising an ion-conducting membrane, at least one anode electrode layer, at least one cathode electrode layer, at least one porous, water repellent gas diffusion layer mounted on the anode side and at least one porous, water repellent gas diffusion layer mounted on the cathode side,

wherein

- the total pore volume of the cathode gas diffusion layer is higher than the total pore volume of the anode gas diffusion layer ($V_{Cathode} > V_{Anode}$), and
- the amounts ~~amount~~ of water repellent agent in the anode and the cathode gas diffusion layers ~~layer is~~ are in the range of 20 to 35% by weight (based on the total weight of the gas diffusion layer), and
- the amount of water repellent agent in the anode gas diffusion layer is identical or higher than the amount of water repellent agent in the cathode gas diffusion layer ($WRA_{Anode} \geq WRA_{Cathode}$)
- wherein the gas diffusion layers on the anode and/or the cathode side comprise a microlayer with a layer thickness between 10 and 20 microns.

2. (original) Membrane electrode unit according to Claim 1, wherein the total pore volume of the gas diffusion layer on the cathode side ($V_{Cathode}$) is in the range from 1.0 to 2.5 ml/g and the total pore volume of the gas diffusion layer on the anode side (V_{Anode}) is in the range from 0.5 to 2.0 ml/g.

3. (previously presented) Membrane electrode unit according to Claim 1, wherein the water repellent agent comprises fluorinated polymers such as PTFE, PVDF, and FEP and mixtures thereof.

4. (cancel)

5. (currently amended) Membrane electrode unit according to Claim 1, wherein the ion-conducting membrane comprises a proton-conducting polymer material[[s]] ~~such as tetrafluoro-ethylene/fluorovinyl ether copolymers having acid functions, in particular sulphonic groups~~.

6 – 10. (cancel)

11. (new) Membrane electrode unit according to Claim 5, wherein the proton-conducting polymer material comprises a tetrafluoro-ethylene/fluorovinyl ether copolymer.

12. (new) Membrane electrode unit according to Claim 11, wherein the tetrafluoro-ethylene/fluorovinyl ether copolymer has sulphonic groups.

13. (new) Membrane electrode unit according to Claim 1, wherein the electrode layers comprise a catalytically active, finely divided noble metal.

14. (new) Membrane electrode unit according to Claim 13, wherein the noble metal is platinum, palladium, ruthenium, gold or combinations thereof.

15. (new) Membrane electrode unit according to Claim 1 further comprising a sealing material.

16. (new) Membrane electrode unit according to Claim 1 further comprising a reinforcing material for gas-tight sealing on installation in a membrane fuel cell stack.

17. (new) Membrane fuel cell stack comprising a membrane electrode unit according to Claim 1.

18. (new) Process for operating a membrane fuel cell stack with dry, unhumidified operating gases comprising:
- providing a membrane fuel cell stack which comprises the membrane electrode unit according to Claim 1, and
- providing or feeding dry, unhumidified gases to the anode and cathode of the membrane electrode unit.

19. (new) Process for operating a membrane fuel cell stack according to claim 18, wherein the dry, unhumidified gases comprise hydrogen, reformate gas, oxygen or air.